

IN THE CLAIMS:

Please cancel claims 1-24 and replace them with new claims 25-48 as follows:

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Claim 25. An isolated DNA molecule comprising nucleotides 1-29,574 of SEQ ID NO. 3 or an isolated DNA molecule that hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions and which encodes a functional ovine adenovirus genome.

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Claim 26. The isolated DNA molecule of claim 1 wherein the DNA molecule specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 13 and shares at least 90% identity therewith.

Claim 27. The isolated DNA molecule of claim 25 wherein the nucleotide sequence is a variant of nucleotide 1-29,574 of SEQ ID NO. 3 which comprises at least one nucleotide difference in the ovine adenovirus genomic sequence that does not alter the amino acid sequences encoded thereby.

Claim 28. An isolated DNA molecule comprising the OAV287 inverted terminal repeat consisting of nucleotides 1 through 46 of SEQ ID NO. 3.

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Claim 29. An isolated DNA molecule having a nucleotide sequence which specifically hybridizes under high stringency conditions to the complement nucleotide 1-29,574 of SEQ ID NO. 3, wherein the DNA molecule comprises an ovine adenovirus genome from which all or part of a nonessential portion encoding genetic information that is not essential to the maintenance or viability of the ovine adenovirus has been deleted or altered, said nonessential portion comprising an open reading frame comprising nucleotides 28457 through nucleotide 29014 of the complement of SEQ ID NO. 3 or an open reading frame comprising nucleotides 28511 through nucleotide 28699 of the complement of SEQ ID NO. 3.

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Claim 30. A plasmid having the structure of pOAV600 or pOAV200.

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Claim 31. A plasmid comprising a bacterial origin of replication and a first nucleotide sequence as set forth in nucleotides 1-29,574 of SEQ ID NO. 3 or a second nucleotide sequence that specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions and which comprises a functional ovine adenovirus genome.

Claim 32. The plasmid of claim 31 wherein the second nucleotide sequence hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 and shares at least 90% identity therewith.

Claim 33. The plasmid of claim 31 or 32 wherein the first or second nucleotide sequence is operatively linked to a third nucleotide sequence encoding a non-adenovirus polypeptide.

D⁴ Claim 34. The plasmid of claim 33 wherein the inverted terminal repeats of the first nucleotide sequence are linked together or the inverted terminal repeats of the second nucleotide sequence are linked together.

REV Claim 35. The plasmid of claim 33 or 34 wherein the third nucleotide sequence encodes resistance to an antimicrobial agent.

Claim 36. A vector comprising (1) a first nucleotide sequence having the sequence as set forth in nucleotides 1-29,574 of SEQ ID NO. 3 or a second nucleotide sequence that specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions and which comprises the ovine adenovirus

genome; and (2) a third nucleotide sequence encoding at least one non-adenoviral polypeptide operatively linked to the first or second nucleotide sequence.

Claim 37. The vector of claim 36 wherein the second nucleotide sequence specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 and shares at least 90% identity therewith.

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Claim 38. The vector of claim 37 comprising the second nucleotide sequence operatively linked to a third nucleotide sequence encoding at least one non-adenoviral polypeptide.

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Claim 39. The vector of any one of claims 36-38 wherein the non-adenoviral polypeptide is a bacterial, viral, parasite or eucaryotic polypeptide.

Claim 40. The vector of claim 39 wherein the non-adenoviral polypeptide is selected from rotavirus VP7sc antigen, *Trichostrongylus colubriformis* 17 kD antigen, *Taenia ovis* 45W antigen and *Lucila cuprina* PM95 antigen.

Claim 41. A method of delivering a DNA molecule encoding at least one non-adenoviral polypeptide to a target cell comprising transfecting the target cell with a

vector comprising (1) a first nucleotide sequence set forth in nucleotides 1-29,574 of SEQ ID NO. 3 or a second nucleotide sequence that hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions and which comprises the ovine adenovirus genome; and (2) a third nucleotide sequence encoding at least one non-adenoviral polypeptide, wherein the at least one polypeptide is expressed in the target cell.

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Claim 42. A method of delivering a DNA molecule encoding at least one non-adenoviral polypeptide to an animal comprising administering to the animal a vector comprising (1) a first nucleotide sequence as set forth in nucleotides 1-29,574 of SEQ ID NO. 3 or a second nucleotide sequence that specifically hybridizes to the complement of nucleotide 1-29,574 of SEQ ID NO. 3 under high stringency conditions and which comprises the ovine adenovirus genome; and (2) a third nucleotide sequence encoding at least one non-adenoviral polypeptide, wherein the vector tranfects at least one cell of the animal and the at least one polypeptide is expressed therein.

Claim 43. The method of claim 42 wherein the vector is administered to a grazing animal.

Claim 44. The method of claim 43 wherein the vector is administered to a sheep.

Claim 45. A vector comprising (1) a first nucleotide as set forth in SEQ ID NO. 3 or a second nucleotide sequence that specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions and which comprises the ovine adenovirus genome; and (2) a nucleotide sequence encoding an RNA molecule.

Claim 46. The vector of claim 45 wherein the RNA molecule is an antisense RNA molecule or ribozyme.

Claim 47. A method of delivering a DNA molecule encoding a functional RNA molecule to an animal comprising administering to the animal a viral vector comprising (1) a first nucleotide sequence as set forth in SEQ ID NO. 3 or a second nucleotide sequence that specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions and which comprises the ovine adenovirus genome; and (2) a nucleotide sequence encoding an RNA molecule, wherein the vector transfects at least one cell of the animal and the nucleotide sequence encoding the RNA molecule is expressed therein.

Claim 48. A plasmid comprising a DNA molecule having the nucleotide sequence as set forth in SEQ ID NO. 3.

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Claim 49. A plasmid comprising a DNA molecule having a first nucleotide sequence that specifically hybridizes to nucleotides 1-29574 of SEQ ID NO. 3 under high stringency conditions and which comprises the ovine adenovirus genome operatively linked to a second nucleotide sequence encoding a bacterial origin of replication, wherein the first nucleotide sequence comprises ovine adenovirus inverted terminal repeat sequences that are linked by a third nucleotide sequence which contains at least one unique restriction enzyme site that is not present in the ovine adenovirus genome.

Claim 50. A plasmid comprising the DNA molecule of claim 29.

Claim 51. A vector comprising the DNA molecule of claim 29.
